

Application Serial No. 10/691,930

**REMARKS**

1. Claims 1-7 stand rejected under the judicially created doctrine of obviousness-type double patenting. Applicant provides herewith a terminal disclaimer in the current application. As such, the obviousness-type double patenting rejection is deemed to be overcome.

2. Claim 1 stands rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,208,373 ("Fong"). To distinguish the claimed invention from the cited reference more thoroughly, Applicant amends claim 1 to describe "means for determining a rectifying transformation associated with each of said imaging device collection members." Support for the amendment is found at claim 21 of the parent, U. S. Patent application ser. no. 09/995,272, filed November 27, 2001. Claim 21 of the parent application was rejected under 35 U.S.C. 102(e) as being anticipated by Fong. Applicant respectfully disagrees. The Examiner relied on element 302 of Fong's Figure 3 as teaching the subject matter in question. The function of element 302, denoted the "field graph software," is only cursorily described in Fong's specification:

"An enhanced field graph software application 302 . . . may be integrated with the normal audio/video processing software . . . ." Col. 7, lines 41-43.

"SW 302 contains routines required to combine data received from [the] cameras . . . ." Col. 7, lines 45-46.

"[O]nly a virtual image is calculated based on a desired virtual position and direction of a virtual camera resulted from data supplied by a plurality of actual cameras . . . ." Col. 7, lines 63-66.

"SW 302 has the capability has the capability of modeling a new image stream from the input streams and variable and constant data, the new stream containing new pixel values created from the actual pixel data of the two separate image streams . . . ." Col. 8, lines 47 to 51.

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Therefore, as described in Fong, the data streams are combined to produce a new data stream, or a virtual image is created by combining images from data supplied by the actual cameras. Beyond saying that the data from the cameras is somehow combined, there is no teaching in Fong that the software application determines "a rectifying transformation associated with each of said imaging device collection members." In fact, Fong doesn't even suggest the subject matter in question. There is no indication that the individual data streams undergo any type of individual processing or correction at all prior to being combined to form Fong's virtual image. Fong additionally describes software

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10 302:

"SW 302 is enhanced with the capability of recognizing the tilt direction and angle of a user's face along an x-y-z axis by comparing an actual camera view of a user's face with a pre-entered face-on view of the user's face . . . enabling SW 302 to predict the directional angle of the user's gaze at any given moment." Col. 8, lines 62 to 67.

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The above is the only substantive description of the software functionality; yet it, too, fails to describe, even implicitly "a rectifying transformation associated with each of said imaging device collection members."

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Thus, claim 21 of the parent application described subject matter distinct from anything described by Fong. Accordingly, Claim 1 of the present application, as amended, is deemed to be distinct from Fong, and therefore allowable.

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3. Claims 2-7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Fong in view of U.S. Patent No. 6,219,444 ("Shashua"). Applicant respectfully disagrees. The Examiner correctly notes that Fong does not teach "means for calculating at least one dense correspondence to determine a displacement in at least a first dimension for each of said pixels in at least one first of said images;" and

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"means for generating an interpolated image based upon said at least one dense correspondence for each of said at least two images." (emphasis added) The

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Examiner relies on Fig. 2A and col. 5, line 14-38 of Shashua as supplying the missing teachings. However, as shown in the cited Figure 2A and described at lines 14-48 of Col. 5, Shashua does not describe computing two interpolated images as in claim 2. Rather, Shashua describes computation of one  
5 interpolated image based on the dense correspondence: "While two of the model images are used to compute the dense correspondence . . . the third model view is used solely to compute the initial 'real' tensor . . ." (emphasis added) Accordingly, there is no teaching in the combination of "means for generating an interpolated image based upon said at least one dense correspondence for each  
10 of said at least two images." (emphasis added) Because the combination fails to teach all elements of claim 2, claim 2 is deemed to be patentably distinct. Therefore, the current rejection is deemed to be improper.

Even if the combination taught all features of the claimed invention, it would be improper because the Examiner has not identified a proper motivation  
15 to combine the references. Defining the problem in terms of its solution reveals improper hindsight in the selection of the prior art relevant to obviousness. *Monarch Knitting Mach. Corp. v. Sulzer Morat GmbH*, 139 F.3d 877 (Fed. Cir. 1998). The trial court in *Monarch Knitting Machinery* had defined the problem facing the inventor as "designing the stem segment of a knitting needle . . . [to]  
20 minimize [] needle head breakage and thus maximiz[] the operatin speed of an industrial knitting machine." (Emphasis, brackets in original) *Id.* The patent, on the other hand described the problem as "providing [knitting needles] with a means which avoids head breakages . . ." (brackets in original) *Id.* The appeals court found that the district court's formulation of the problem presumed the  
25 solution to the problem. Importing the solution into the problem facing the inventor infected the trial court's determination about the prior art. In our case, just as in *Monarch Knitting Machinery*, the Examiner has defined the problem facing the inventor in terms of its solution. The Examiner circularly suggests that the inventor, looking to solve the problem of providing "means for calculating at  
30 least one dense correspondence to determine a displacement in at least a first dimension for each of said pixels in at least one first of said images" and "means

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for generating an interpolated image based upon said at least one dense correspondence for each of said at least two images," would be motivated to look to Shashua, which allegedly provides "means for calculating at least one dense correspondence to determine a displacement in at least a first dimension for each of said pixels in at least one first of said images" and "means for generating an interpolated image based upon said at least one dense correspondence for each of said at least two images." Thus, the Examiner has improperly defined the problem facing the inventor in terms of its solution. Because the Examiner has used improper hindsight in selecting prior art references, he has failed to identify a proper motivation to make the combination. Therefore, the current rejection is deemed to be improper.

Regarding claims 3-7: In view of their dependence from an allowable claim, the remaining claims are deemed to be allowable without any additional consideration of their merits. Nevertheless, Applicant provides the following comments regarding the dependent claims:

Claim 3: The Examiner relies on col. 5, lines 56-62 as teaching combining "at least two interpolated images." But in these lines, Shashua is describing "averaging pixel by pixel the real images 1 and 2." That is, Shashua describes averaging two of the unprocessed, original images—not the interpolated images.

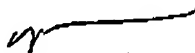
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**CONCLUSION**

In view of the foregoing, the application is deemed to be in allowable condition.  
Therefore, the Examiner is earnestly requested to withdraw the outstanding  
5 rejections, allowing the application to pass to issue as a United States Patent.  
Should the Examiner deem it helpful, he is urged to contact Applicant's attorney  
at 650-474-8400.

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Respectfully submitted,



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